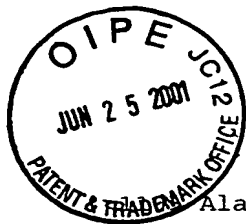


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SEQUENCE LISTING

Alam, Maqsudul
Larsen, Randy

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MEDICINE AND MICROSENSORS

<130> 201040/1020

<140> 09/455,978

<141> 1999-12-06

<160> 86

BEST AVAILABLE COPY

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<213> Halobacterium salinarum

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50 55 60

Val Thr Asp Phe Tyr Asp His Leu Glu Ser Tyr Glu Arg Thr Gln Asp
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Ala Glu Tyr Leu Leu Gly Leu Gly Arg Gly Glu Tyr Asp Thr Glu Tyr
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Ala Ala Gln Arg Ala Arg Ile Gly Lys Ile His Asp Val Leu Gly Leu
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Ala Ala Ala Val Asp Glu Leu Val Ala Arg Phe Leu Pro Met Leu Lys
165 170 175

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470

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480

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<211> 1390

<212> DNA

<213> Bacillus subtilis

<400> 3

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<213> Bacillus subtilis

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Tyr Val Leu Glu Gln Leu Gln Pro Leu Ile Gln Glu Asn Ile Val Asn	50	55	60		
Ile Val Asp Ala Phe Tyr Lys Asn Leu Asp His Glu Ser Ser Leu Met	65	70	75	80	
Asp Ile Ile Asn Asp His Ser Ser Val Asp Arg Leu Lys Gln Thr Leu	85	90	95		
Lys Arg His Ile Gln Glu Met Phe Ala Gly Val Ile Asp Asp Glu Phe	100	105	110		
Ile Glu Lys Arg Asn Arg Ile Ala Ser Ile His Leu Arg Ile Gly Leu	115	120	125		
Leu Pro Lys Trp Tyr Met Gly Ala Phe Gln Glu Leu Leu Leu Ser Met	130	135	140		
Ile Asp Ile Tyr Glu Ala Ser Ile Thr Asn Gln Gln Glu Leu Leu Lys	145	150	155	160	
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Glu Lys Lys Asn Leu Leu His Gln Lys Ile Gln Glu Thr Ser Gly Ser	195	200	205		
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<212> PRT

<213> Artificial Sequence

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<222> (4)

<223> X at any position in this sequence is unknown.

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Glu Lys Phe Phe Phe Phe Lys His Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
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<210> 6
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 <213> *Erwinia chrysanthemi*

<400> 6
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Ala His Phe Tyr Gln Arg Met Phe His His Asn Pro Glu Leu Lys Asp
 20 25 30

Ile Phe Asn Met Ser Asn Gln Arg Asn Gly Asp Gln Arg Glu Ala Leu
 35 40 45

Phe Asn Ala Ile Cys Ala Tyr
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<210> 7
 <211> 56
 <212> PRT
 <213> *Vitreoscilla stercoraria*

<400> 7
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 1 5 10 15

Thr Thr Thr Phe Tyr Lys Asn Leu Phe Ala Lys His Pro Glu Val Arg
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Pro Leu Phe Asp Met Gly Arg Gln Glu Ser Leu Glu Gln Pro Lys Ala
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Leu Ala Met Thr Val Leu Ala Ala

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55

<210> 8

<211> 55

<212> PRT

<213> Escherichia coli

<400> 8

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Ala His Phe Tyr Asp Arg Met Phe Thr His Asn Pro Glu Leu Lys Glu
20 25 30

Ile Phe Asn Met Ser Asn Gln Arg Asn Gly Asp Gln Arg Glu Ala Leu
35 40 45

Phe Asn Ala Ile Ala Ala Tyr
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<210> 9

<211> 55

<212> PRT

<213> Salmonella typhimurium

<400> 9

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Ala His Phe Tyr Asp Arg Met Phe Thr His Asn Pro Glu Leu Lys Glu
20 25 30

Ile Phe Asn Met Ser Asn Gln Arg Asn Gly Asp Gln Arg Glu Ala Leu
35 40 45

Phe Asn Ala Ile Ala Ala Tyr
50 55

<210> 10

<211> 56

<212> PRT

<213> Ralstonia eutropha

<400> 10

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 Leu Ala Arg Ala Val Tyr Ala Tyr
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<210> 11
 <211> 56
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 <213> *Vibrio parahaemolyticus*

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 35 40 45
 Leu Phe Asn Ala Ile Cys Ala Tyr
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<210> 12
 <211> 56
 <212> PRT
 <213> *Clostridium perfringens*

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 Pro Leu Phe Asn Met Asn Lys Gln Glu Ser Glu Glu Gln Pro Lys Ala
 35 40 45
 Leu Ala Met Ala Ile Leu Ala Val
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<210> 13
<211> 56
<212> PRT
<213> *Fusarium oxysporum*

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Thr Thr Thr Phe Tyr Arg Asn Met Leu Gly Ala His Pro Glu Leu Lys
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35 40 45
Leu Ala Asn Ser Val Leu Ala Tyr
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<210> 14
<211> 53
<212> PRT
<213> *Aquifex aeolicus*

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Thr Ala Arg Met Tyr Glu Leu Leu Phe Ser Lys Tyr Pro Lys Thr Lys
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Ala Ile Ile Ala Tyr
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<210> 15
<211> 56
<212> PRT
<213> *Bacillus subtilis*

<400> 15
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Thr Gly Arg Phe Tyr Asp Arg Met Phe Gln Asp His Pro Glu Leu Leu
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 35 40 45

Leu Ala Asn Ala Val Ile Ala Ala
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<210> 16

<211> 56

<212> PRT

<213> *Xenopus laevis*

<400> 16

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Gly Glu Ala Leu Tyr Arg Met Phe Leu Val Asn Pro Lys Thr Lys Thr
 20 25 30

Tyr Phe Pro Ser Phe Asp Phe His His Asn Ser Lys Gln Ile Thr Ser
 35 40 45

His Gly Lys Lys Val Val Asp Ala
 50 55

<210> 17

<211> 57

<212> PRT

<213> *Chironomus thummi*

<400> 17

Asp Gln Leu Ala Leu Phe Lys Ser Ser Trp Asn Thr Val Lys His Asn
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Glu Val Asp Ile Leu Tyr Ala Val Phe Lys Ala Asn Pro Asp Ile Gln
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Ala Lys Phe Pro Gln Phe Ala Gly Lys Asp Leu Asp Ser Ile Lys Asp
 35 40 45

Ser Ala Asp Phe Ala Val His Ser Gly
 50 55

<210> 18

<211> 56

<212> PRT

<213> *Xenopus borealis*

<400> 18

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Gly Glu Ala Leu Tyr Arg Met Phe Leu Val Asn Pro Lys Thr Lys Thr
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Tyr Phe Pro Thr Phe Asp Phe His His Asn Ser Lys Gln Ile Ser Ala
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His Gly Lys Lys Val Val Asp Ala
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<210> 19

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<212> PRT

<213> *Xenopus borealis*

<400> 19

Ile Lys Ala Ile Leu Pro Ser Ile Ala Ala His Gly Asp Lys Phe Gly
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Gly Glu Ala Leu Tyr Arg Met Phe Leu Ile Asn Pro Lys Thr Lys Thr
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Tyr Phe Pro Asn Phe Asp Phe His His Asn Ser Lys Gln Ile Ser Ala
35 40 45

His Gly Lys Lys Val Val Asp Ala
50 55

<210> 20

<211> 57

<212> PRT

<213> *Chironomus thummi*

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Ala Arg Phe Pro Gln Phe Ala Gly Lys Asp Leu Asp Ser Ile Lys Thr
35 40 45

Thr Gly Gln Phe Ala Val His Ala Gly
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<210> 21

<211> 55

<212> PRT

<213> *Pichia norvegensis*

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Tyr Phe Asn Met Thr Asn Gln Lys Thr Gly Arg Gln Pro Lys Val Leu
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Ala Phe Ser Leu Tyr Gln Tyr
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<210> 22

<211> 56

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 22

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Thr Arg Thr Phe Tyr Lys Asn Met Leu Thr Glu His Thr Glu Leu Leu
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Asn Ile Phe Asn Arg Thr Asn Gln Lys Val Gly Ala Gln Pro Asn Ala
35 40 45

Leu Ala Thr Thr Val Leu Ala Ala
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 <211> 41
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 Ala Ser Glu Asp Leu Lys Lys His Gly
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 <211> 41
 <212> PRT
 <213> *Kogia simus*

<400> 24
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 Ala Ser Glu Asp Leu Lys Lys His Gly
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 <211> 41
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 <213> *Rousettus aegyptiacus*

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 Ala Ser Glu Asp Leu Lys Lys His Gly
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<211> 41
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<213> Delphinus delphis

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Glu Lys Phe Asp Lys Phe Lys His Leu Lys Thr Glu Ala Asp Met Lys
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Ala Ser Glu Asp Leu Lys Lys His Gly
35 40

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<211> 41
<212> PRT
<213> Globicephala melas

<400> 27
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Ala Ser Glu Asp Leu Lys Lys His Gly
35 40

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<211> 41
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<213> Aethia pygmaea

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Gly Ser Glu Asp Leu Lys Lys His Gly
35 40

<210> 29
<211> 39
<212> PRT
<213> Mustelus antarcticus

<400> 29
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Thr Ala Asp Ile Lys Ala Gln
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<211> 39
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<223> X at any position in this sequence is unknown.

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Lys Ile Pro Asp Trp Tyr Leu
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<210> 31
<211> 39
<212> PRT
<213> Physeter catodon

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 20 25 30

Lys Ile Pro Ile Lys Tyr Leu
 35

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 <213> Kogia simus

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Lys Ile Pro Ile Lys Tyr Leu
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<210> 33
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 <212> PRT
 <213> Rousettus aegyptiacus

<400> 33
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Lys Ile Pro Val Lys Tyr Leu
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<210> 34
 <211> 39
 <212> PRT
 <213> Delphinus delphis

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Lys Ile Pro Ile Lys Tyr Leu
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<210> 35
 <211> 39
 <212> PRT
 <213> Globicephala melas

<400> 35
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Lys Ile Pro Ile Lys Tyr Leu
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<210> 36
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 <212> PRT
 <213> Aethia pygmaea

<400> 36
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Lys Ile Pro Val Lys Tyr Leu
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<210> 37
 <211> 39
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 <213> Bacillus subtilis

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<211> 40
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<213> Mustelus antarcticus

<400> 38
Ala Asp Thr Val Leu Ser Ala Leu Gly Asn Ile Val Lys Lys Lys Gly
1 5 10 15

Ser His Ser Gln Pro Val Lys Ala Leu Ala Ala Thr His Ile Thr Thr
 20 25 30

His Lys Ile Pro Pro His Tyr Phe
 35 40

<210> 39
<211> 39
<212> PRT
<213> Halobacterium salinarum

<400> 39
Gln Ala Glu Tyr Leu Leu Gly Leu Gly Arg Gly Glu Tyr Asp Thr Glu
1 5 10 15

Tyr Ala Ala Gln Arg Ala Arg Ile Gly Lys Ile His Asp Val Leu Gly
 20 25 30

Leu Gly Pro Asp Val Tyr Leu
 35

<210> 40
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning

primer

<400> 40

ccgaattcca tatgagcaac gataatgac

29

<210> 41

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Cloning
primer

<220>

<221> unsure

<222> (13)..(14)

<223> N at any position in this sequence is unknown

<400> 41

cctctagagg atnnctagct gagcttgccg acc

33

<210> 42

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Cloning
primer

<220>

<221> unsure

<222> (29)

<223> N at position 29 in this sequence is unknown

<400> 42

tatgggatcc cttgttcac acgggtctnt tgg

33

<210> 43

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Cloning
primer

<400> 43

gataaagctt gatcatagct cagttgaccg

30

<210> 44

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Cloning
primer

<400> 44

tgctgaattc gcagctttca ttcattgttc cc

32

<210> 45

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Cloning
primer

<400> 45

ttagggatcc gtcaactgat ttttaattta agttac

36

<210> 46

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Cloning
primer

<400> 46

atatggatcc aaggggatc attgtaatgt tatttaaaaa ag

42

<210> 47

<211> 46

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Cloning
 primer

 <400> 47
 attactgcag caactgattt ttaatttaag tttacataat gaacgc 46

 <210> 48
 <211> 29
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Cloning
 primer

 <400> 48
 ccgaattcca tatgagcaac gataatgac 29

 <210> 49
 <211> 35
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Cloning
 primer

 <400> 49
 ctctagagga tccctagtcg tcggcaagcg cgtcc 35

 <210> 50
 <211> 35
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Cloning
 primer

 <220>
 <221> unsure

<222> (15)
<223> N at position 15 in this sequence is unknown

<400> 50
cctctagagg atccntagac gtcagccatg cggtc 35

<210> 51
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning
primer

<400> 51
cctctagagg atccctaggc gacgtcctgc gaggtcgcc 39

<210> 52
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning
primer

<400> 52
cctctagagg atccctacgc gttcgccaac tcctggcggc 40

<210> 53
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning
primer

<400> 53
cctctagagg atccctagat gtaggtgtcc attgcatc 39

<210> 54
<211> 38

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Cloning
 primer

 <400> 54
 cctctagagg atccctaccg ggccacgagt tcgtcgac 38

 <210> 55
 <211> 38
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Cloning
 primer

 <400> 55
 cctctagagg atccctactg gcggctgtcg atctcgtc 38

 <210> 56
 <211> 38
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Cloning
 primer

 <400> 56
 cctctagagg atccctactc gtcgtggagg cgctgggc 38

 <210> 57
 <211> 39
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Cloning
 primer

 <400> 57
 cctctagagg atccctactg ggcgtacgag tcgatgtag 39

<210> 58
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning
primer

<400> 58
cctctagagg atccctaggc gtacgagtcg atgtaggtgt cc 42

<210> 59
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning
primer

<400> 59
cctctagagg atccctagta cgagtcgatg taggtgtcc 39

<210> 60
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning
primer

<400> 60
cctctagagg atccctacga gtcgatgtag gtgtccattg cg 42

<210> 61
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning

primer

<400> 61

cctctagagg atccctagtc gatgtaggtg tccattgcg

39

<210> 62

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Cloning
primer

<400> 62

ccgaattcca tatgagcaac gataatgac

29

<210> 63

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Cloning
primer

<400> 63

cctctagact agctgagctt gccgacc

27

<210> 64

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Cloning
primer

<400> 64

ggaacgggat cgacggggcc gcactcgcgg accgg

35

<210> 65

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Cloning
primer

<400> 65

ccgggtccgcg agtgcggcc cgatcgatccc gttcc

35

<210> 66

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Cloning
primer

<400> 66

gaccgacttc tacgacgcct tggagtccta cgagcg

36

<210> 67

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Cloning
primer

<400> 67

cgctcgtagg actccaaggc gtcgtagaag tcggtc

36

<210> 68

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Cloning
primer

<400> 68

ccgtatcggg aagatagccg acgtgctcgg gctcg

35

<210> 69
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning
primer

<400> 69
cgagcccgag cacgtcggct atcttcccga tacgg 35

<210> 70
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning
primer

<400> 70
cgtacgcccc ggcctcgcc gacgagatcg acagcc 36

<210> 71
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning
primer

<400> 71
ggctgtcgat ctgctcggcg aggcgctggg cgtacg 36

<210> 72
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning
primer

<400> 72
gcgaacgcgg tcgccacggc cgtggaagca ccgctg 36

<210> 73
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning
primer

<220>
<221> unsure
<222> (23)
<223> Y at position 23 in this sequence is either t or c

<400> 73
cagcgggtgct tccacggccg tcygcgaccg cgttcgc 37

<210> 74
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning
primer

<400> 74
atatggatcc aagggggatc attgtaatgt tatttaaaaa ag 42

<210> 75
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cloning
primer

<400> 75
attactgcag caactgattt ttaatttaag ttacataat gaacgc 46

<210> 76

<211> 153

<212> PRT

<213> Sperm-whale myoglobin

<400> 76

Val Leu Ser Glu Gly Glu Trp Gln Leu Val Leu His Val Trp Ala Lys
1 5 10 15

Val Glu Ala Asp Val Ala Gly His Gly Gln Asp Ile Leu Ile Arg Leu
20 25 30

Phe Lys Ser His Pro Glu Thr Leu Glu Lys Phe Asp Arg Phe Lys His
35 40 45

Leu Lys Thr Glu Ala Glu Met Lys Ala Ser Glu Asp Leu Lys Lys His
50 55 60

Gly Val Thr Val Leu Thr Ala Leu Gly Ala Ile Leu Lys Lys Lys Gly
65 70 75 80

His His Glu Ala Glu Leu Lys Pro Leu Ala Gln Ser His Ala Thr Lys
85 90 95

His Lys Ile Pro Ile Lys Tyr Leu Glu Phe Ile Ser Glu Ala Ile Ile
100 105 110

His Val Leu His Ser Arg His Pro Gly Asp Phe Gly Ala Asp Ala Gln
115 120 125

Gly Ala Met Asn Lys Ala Leu Glu Leu Phe Arg Lys Asp Ile Ala Ala
130 135 140

Lys Tyr Lys Glu Leu Gly Tyr Gln Gly
145 150

<210> 77

<211> 184

<212> PRT

<213> Halobacterium salinarum

<400> 77

Met Ser Asn Asp Asn Asp Thr Leu Val Thr Ala Asp Val Arg Asn Gly
1 5 10 15

Ile Asp Gly His Ala Leu Ala Asp Arg Ile Gly Leu Asp Glu Ala Glu

	20		25		30										
Ile	Ala	Trp	Arg	Leu	Ser	Phe	Thr	Gly	Ile	Asp	Asp	Asp	Thr	Met	Ala
	35						40					45			
Ala	Leu	Ala	Ala	Glu	Gln	Pro	Leu	Phe	Glu	Ala	Thr	Ala	Asp	Ala	Leu
	50					55					60				
Val	Thr	Asp	Phe	Tyr	Asp	His	Leu	Glu	Ser	Tyr	Glu	Arg	Thr	Gln	Asp
	65				70					75				80	
Leu	Phe	Ala	Asn	Ser	Thr	Lys	Thr	Val	Glu	Gln	Leu	Lys	Glu	Thr	Gln
			85						90					95	
Ala	Glu	Tyr	Leu	Leu	Gly	Leu	Gly	Arg	Gly	Glu	Tyr	Asp	Thr	Glu	Tyr
			100					105						110	
Ala	Ala	Gln	Arg	Ala	Arg	Ile	Gly	Lys	Ile	His	Asp	Val	Leu	Gly	Leu
		115					120						125		
Gly	Pro	Asp	Val	Tyr	Leu	Gly	Ala	Tyr	Thr	Arg	Tyr	Tyr	Thr	Gly	Leu
	130					135					140				
Leu	Asp	Ala	Leu	Ala	Asp	Asp	Val	Val	Ala	Asp	Arg	Gly	Glu	Glu	Ala
	145				150					155					160
Ala	Ala	Ala	Val	Asp	Glu	Leu	Val	Ala	Arg	Phe	Leu	Pro	Met	Leu	Lys
			165						170					175	
Leu	Leu	Thr	Phe	Asp	Gln	Gln	Ile								
			180												

<210> 78

<211> 175

<212> PRT

<213> Bacillus subtilis

<400> 78

Leu	Leu	Phe	Lys	Lys	Asp	Arg	Lys	Gln	Glu	Thr	Ala	Tyr	Phe	Ser	Asp
1				5					10					15	
Ser	Asn	Gly	Gln	Gln	Lys	Asn	Arg	Ile	Gln	Leu	Thr	Asn	Lys	His	Ala
			20					25					30		
Asp	Val	Lys	Lys	Gln	Leu	Lys	Met	Val	Arg	Leu	Gly	Asp	Ala	Glu	Leu
		35					40					45			

Tyr Val Leu Glu Gln Leu Gln Pro Leu Ile Gln Glu Asn Ile Val Asn
50 55 60

Ile Val Asp Ala Phe Tyr Lys Asn Leu Asp His Glu Ser Ser Leu Met
65 70 75 80

Asp Ile Ile Asn Asp His Ser Ser Val Asp Arg Leu Lys Gln Thr Leu
85 90 95

Lys Arg His Ile Gln Glu Met Phe Ala Gly Val Ile Asp Asp Glu Phe
100 105 110

Ile Glu Lys Arg Asn Arg Ile Ala Ser Ile His Leu Arg Ile Gly Leu
115 120 125

Leu Pro Lys Trp Tyr Met Gly Ala Phe Gln Glu Leu Leu Leu Ser Met
130 135 140

Ile Asp Ile Tyr Glu Ala Ser Ile Thr Asn Gln Gln Glu Leu Leu Lys
145 150 155 160

Ala Ile Lys Ala Thr Thr Lys Ile Leu Asn Leu Glu Gln Gln Leu
165 170 175

<210> 79

<211> 274

<212> PRT

<213> Escherichia coli

<400> 79

Leu Met Arg Thr Val Gly Asp Val Arg Asn Gly Ala Asn Ala Ile Tyr
1 5 10 15

Ser Gly Ala Ser Glu Ile Ala Thr Gly Asn Asn Asp Leu Ser Ser Arg
20 25 30

Thr Glu Gln Gln Ala Ala Ser Leu Glu Glu Thr Ala Ala Ser Met Glu
35 40 45

Gln Leu Thr Ala Thr Val Lys Gln Asn Ala Glu Asn Ala Arg Gln Ala
50 55 60

Ser His Leu Ala Leu Ser Ala Ser Glu Thr Ala Gln Arg Gly Gly Lys
65 70 75 80

Val Val Asp Asn Val Val Gln Thr Met Arg Asp Ile Ser Thr Ser Ser
85 90 95

Gln Lys Ile Ala Asp Ile Ile Ser Val Ile Asp Gly Ile Ala Phe Gln
100 105 110

Thr Asn Ile Leu Ala Leu Asn Ala Ala Val Glu Ala Ala Arg Ala Gly
115 120 125

Glu Gln Gly Arg Gly Phe Ala Val Val Ala Gly Glu Val Arg Asn Leu
130 135 140

Ala Gln Arg Ser Ala Gln Ala Ala Arg Glu Ile Lys Ser Leu Ile Glu
145 150 155 160

Asp Ser Val Gly Lys Val Asp Val Gly Ser Thr Leu Val Glu Ser Ala
165 170 175

Gly Glu Thr Met Ala Glu Ile Val Ser Ala Val Thr Arg Val Thr Asp
180 185 190

Ile Met Gly Glu Ile Ala Ser Ala Ser Asp Glu Gln Ser Arg Gly Ile
195 200 205

Asp Gln Val Gly Leu Ala Val Ala Glu Met Asp Arg Val Thr Gln Gln
210 215 220

Asn Ala Ala Leu Val Glu Glu Ser Ala Ala Ala Ala Ala Leu Glu
225 230 235 240

Glu Gln Ala Ser Arg Leu Thr Glu Ala Val Ala Val Phe Arg Ile Gln
245 250 255

Gln Gln Gln Arg Glu Thr Ser Ala Val Val Lys Thr Val Thr Pro Ala
260 265 270

Ala Pro

<210> 80

<211> 268

<212> PRT

<213> Halobacterium salinarum

<400> 80

Leu Glu Ala Thr Ser Gln Asp Val Ala Glu Arg Thr Asp Thr Met Arg
1 5 10 15

Ala Arg Thr Asp Asp Gln Val Asp Arg Met Ala Asp Val Ser Arg Glu

	20		25		30
Ile Ser Ser Val Ser Ala Ser Val Glu Glu Val Ala Ser Thr Ala Asp					
	35		40		45
Asp Val Arg Arg Thr Ser Glu Asp Ala Glu Ala Leu Ala Gln Gln Gly					
	50		55		60
Glu Ala Ala Ala Asp Asp Ala Leu Ala Thr Met Thr Asp Ile Asp Glu					
	65		70		75
Ala Thr Asp Gly Val Thr Ala Gly Val Glu Gln Leu Gly Glu Arg Ala					
		85		90	95
Ala Asp Val Glu Ser Val Thr Gly Val Ile Asp Asp Ile Ala Glu Gln					
	100		105		110
Thr Asn Met Leu Ala Leu Asn Ala Ser Ile Glu Ala Ala Arg Ala Gly					
	115		120		125
Glu Ala Gly Glu Gly Phe Ala Val Val Ala Asp Glu Val Lys Ala Leu					
	130		135		140
Ala Glu Glu Ser Arg Glu Gln Ser Thr Arg Val Glu Glu Leu Val Glu					
	145		150		155
Gln Met Gln Ala Glu Thr Glu Glu Thr Val Asp Gln Leu Asp Glu Val					
		165		170	175
Asn Gln Arg Ile Gly Glu Gly Val Glu Arg Val Glu Glu Ala Met Glu					
	180		185		190
Thr Leu Gln Glu Ile Thr Asp Ala Val Glu Asp Ala Ala Ser Gly Met					
	195		200		205
Gln Glu Val Ser Thr Ala Thr Asp Glu Gln Ala Val Ser Thr Glu Glu					
	210		215		220
Val Ala Glu Met Val Asp Gly Val Asp Asp Arg Ala Gly Glu Ile Ala					
	225		230		235
Ala Ala Leu Asp Asp Ile Ala Asp Ala Thr Asp Gln Gln Val Arg Thr					
		245		250	255
Val Glu Glu Val Arg Glu Thr Val Gly Lys Leu Ser					
	260		265		

<210> 81

<211> 235

<212> PRT

<213> Bacillus subtilis

<400> 81

Leu His Gln Lys Ile Gln Glu Thr Ser Gly Ser Ile Ala Asn Leu Phe
1 5 10 15

Ser Glu Thr Ser Arg Ser Val Gln Glu Leu Val Asp Lys Ser Glu Gly
20 25 30

Ile Ser Gln Ala Ser Lys Ala Gly Thr Val Thr Ser Ser Thr Val Glu
35 40 45

Glu Lys Ser Ile Gly Gly Lys Lys Glu Leu Glu Val Gln Gln Lys Gln
50 55 60

Met Asn Lys Ile Asp Thr Ser Leu Val Gln Ile Glu Lys Glu Met Val
65 70 75 80

Lys Leu Asp Glu Ile Ala Gln Gln Ile Glu Lys Ile Phe Gly Ile Val
85 90 95

Thr Gly Ile Ala Glu Gln Thr Asn Leu Leu Ser Leu Asn Ala Ser Ile
100 105 110

Glu Ser Ala Arg Ala Gly Glu His Gly Lys Gly Phe Ala Val Val Ala
115 120 125

Asn Glu Val Arg Lys Leu Ser Glu Asp Thr Lys Lys Thr Val Ser Thr
130 135 140

Val Ser Glu Leu Val Asn Asn Thr Asn Thr Gln Ile Asn Ile Val Ser
145 150 155 160

Lys His Ile Lys Asp Val Asn Glu Leu Val Ser Glu Ser Lys Glu Lys
165 170 175

Met Thr Gln Ile Asn Arg Leu Phe Asp Glu Ile Val His Ser Met Lys
180 185 190

Ile Ser Lys Glu Gln Ser Gly Lys Ile Asp Val Asp Leu Gln Ala Phe
195 200 205

Leu Gly Gly Leu Gln Glu Val Ser Arg Ala Val Ser His Val Ala Ala
210 215 220

<210> 84
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Myoglobin
recognition sequence

<220>
<221> UNSURE
<222> (4)
<223> X at any position in this sequence is unknown

<400> 84
Ile Ile Lys Xaa Thr Val Pro Val Leu Xaa Glu His Gly Xaa Xaa Ile
1 5 10 15

<210> 85
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Myoglobin
recognition sequence

<220>
<221> UNSURE
<222> (11)
<223> X at position 11 is unknown

<400> 85
Gly Gln Asp Val Leu Val Val Leu Ile Lys Xaa Asn Pro Glu Ile Gln
1 5 10 15

Glu Lys Phe Phe Phe Phe Lys His
20

<210> 86
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Myoglobin

recognition sequence

<220>

<221> UNSURE

<222> (4)

<223> X at any position in this sequence is unknown

<400> 86

Ala	Gln	Arg	Xaa	Arg	Leu	Ala	Gln	Ile	His	Ala	Xaa	Lys	Gly	Lys	Ile
1				5				10					15		

Pro	Asp	Trp	Tyr	Leu
			20	